RESPONSE TO 6/21/07 OFFICIAL ACTION

Applicant(s): Adalbert Roehrig et al

Serial No.: 10/550,373 Confirmation No.: 7961 Group Art Unit: 1725 Filed: June 28, 2006 Examiner: Kuang Y. Lin

Docket No.: 02482/0203338-US0

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AMENDMENTS TO THE CLAIMS

- 1. (Currently Amended) Mold for the continuous casting of round billet and bloom formats, comprising a copper tube, which forms a mold cavity, and an arrangement for cooling the copper tube by water-circulation cooling, wherein the copper tube is provided over its entire circumference and substantially over its entire length with a supporting shell which supports the copper tube at its outer lateral surface at supporting surfaces thereof, the supporting surfaces comprising at least supporting ribs and connecting ribs provided with securing devices to prevent transverse movements of the copper tube, and further comprising cooling ducts delimited by the supporting ribs and the connecting ribs arranged for guiding the water distributed over the entire circumference and arranged substantially over the entire mold length in one of the copper tube and the supporting shell.
- (Currently Amended) Mold for the continuous casting of polygonal billet and bloom formats, comprising a copper tube, which forms a mold cavity, and an arrangement for cooling the copper tube by water-circulation cooling, wherein the copper tube is provided at the tube outer lateral surface, substantially over the entire circumference and substantially over the entire length, with supporting plates which are connected to the copper tube and which support the walls of the copper tube at supporting surfaces thereof, the supporting surfaces comprising at least supporting ribs and connecting ribs provided with securing devices to prevent transverse movements of the copper tube, and further comprising cooling ducts delimited by the supporting ribs and the connecting ribs arranged for guiding the water distributed over the entire circumference and arranged substantially over the entire mold length in one of the copper tube and the supporting plates.
- 3. (Previously Presented) Mold according to Claim 1, wherein the cooling ducts reduce wall thickness of the copper tube where the cooling ducts are located by an amount selected from the group consisting of 20% to 70% and 30% to 50%.

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4. (Currently Amended) Mold according to Claim 1, wherein the cooling ducts occupy an amount area of the outer surface of the copper tube selected from the group consisting of 65% to 95% and 70% to 80%.

- 5. (Previously Presented) Mold according to Claim 1, wherein the copper tube has a residual wall thickness of 4 mm to 10 mm where the cooling ducts are located.
- 6. (Previously Presented) Mold according to Claim 2, wherein in the case of the mold is rectangular and four supporting plates are releasably attached to the copper tube, each supporting plate butting at an end face against an adjacent plate and overlapping another adjacent plate.
- 7. (Previously Presented) Mold according to Claim 2, wherein supporting plates adjacent to each other are screwed together in corner regions of the copper tube and form a supporting box arranged around the copper tube.
- 8. (Previously Presented) Mold according to Claim 2, further comprising elastic seals which allow expansions of the copper tube walls arranged in overlap gaps between the supporting plates.
- 9. (Cancelled).
- 10. (Currently Amended) Mold according to Claim 2, further comprising narrow supporting surfaces arranged along corner regions thereof and connecting wherein at least one of the supporting ribs or the connecting ribs are arranged in a middle region of the mold sides, the connecting ribs being provided with securing devices to prevent transverse movements.

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11. (Currently Amended) Mold according to Claim [[10]] 2, wherein the securing devices are selected from the group consisting of a dovetail profile, a T-profile for sliding blocks and or a clamping device.

- 12. (Previously Presented) Mold according to Claim 2, wherein the copper tube forms a curved mold cavity and has curved supporting surfaces and the supporting plates have surfaces opposite the curved supporting surfaces.
- 13. (Previously Presented) Mold according to Claim 1, wherein the cooling ducts are milled into the copper tube and are closed off with a copper layer produced by electrodeposition.
- 14. (Previously Presented) Mold according to Claim 1, wherein the supporting shell consists of a material selected from the group consisting of a metallic material, austenitic steel, and non-metallic material which can be easily penetrated by magnetic fields.
- 15. (Previously Presented) Mold according to Claim 1, further comprising externally-arranged magnetic devices selected from the group consisting of electromagnetic coils and moving permanent magnets.
- 16. (Previously Presented) Mold according to Claim 1, further comprising a protective layer to prevent electrolytic corrosion arranged between the supporting shell and the copper tube.
- 17. (Previously Presented) Mold according to Claim 1, further comprising cooling-water supply lines and discharge lines arranged at an upper end of the mold that can be connected to cooling-water by a coupling plate.
- 18. (New) Mold according to Claim 1, wherein the securing devices are selected from the group consisting of a dovetail profile, a T-profile for sliding blocks and a clamping device.

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- 19. (New) Mold according to Claim 1, wherein the securing devices permit longitudinal movements of the copper tube.
- 20. (New) Mold according to Claim 2, wherein the securing devices permit longitudinal movements of the copper tube.